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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,230	01/26/2006	Hitoshi Ohtani	A36510 PCT US	4608

21003 7590 01/04/2007
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NEW YORK, NY 10112-4498

EXAMINER

CHARIOUI, MOHAMED

ART UNIT	PAPER NUMBER
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2857

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/531,230

Applicant(s)

OHTANI, HITOSHI

Examiner

Mohamed Charioui

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-9 is/are rejected.
- 7) ☐ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 7 is rejected under 35 U.S.C. 101 because the claimed invention as a whole must accomplish a practical application. That is it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete claim should contain some indication of the practical application for the claimed invention. In claim 7, lines 15-17, only requires "computing three-dimensional coordinate data on the object to be measured, in accordance with the data related in said fourth step." and does not produce useful, concrete and tangible results. For example, the results were not stored or communicated to the user.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohtomo et al. (U.S. Pub. No. 2002/0085193)

As per claims 1 and 7-9, Ohtomo et al. teach a survey apparatus for measuring a position of a collimation target from distance and angle (see paragraphs [0022] and [0025]); an image acquisition devices each for acquiring images of an object to be measured, inclusive of an image of the collimation target, from different plural directions (see paragraphs [0028] and [0029]); and arithmetic processing means that matches (see paragraph [0047]), by using the collimation target as a tie point, the images that have been acquired by said image acquisition devices, relates the collimation target position that has been measured by said survey apparatus, and the collimation target in each of the matched images, and computes three-dimensional coordinate data of the object to be measured, in accordance with the related target data (see paragraphs [0041] and [0046]-[0048]).

Regarding an electronic storage medium formed as an FD, CD, DVD, RAM, ROM, memory card, or the like, said storage medium having a program stored therein to lay down procedural steps of: reading both distance data and angle data of the collimation target measured by a survey apparatus; reading image data inclusive of the collimation target photographed from different directions by a plurality of image acquisition devices (claim 9) (see paragraphs [0061] and [0062]).

As per claims 3 and 4, Ohtomo et al. further teach that each of the collimation targets is formed of a retroreflective material, and on the surface thereof is formed a mark that facilitates collimation (see paragraphs [0020] and [0034]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtomo et al. in view of Ni (U.S. Patent No. 6,382,510).

Ohtomo et al. further teach that said mark includes the cross hairs that facilitate collimation and a visually identifiable character (see paragraphs [0048]-[0051] and Fig. 4).

Ohtomo et al. do not explicitly teach that the mark includes an electrically readable code.

Ni teaches this feature (see col. 2, line 50 to col. 3, line 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Ni's teaching into Ohtomo et al.'s invention because it would associate the measurement data with the respective image and accurate and efficient results would be obtained.

Allowable Subject Matter

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4. **Claim 2** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of the prior art of record teaches or suggests that the arithmetic processing means performs corrections for inclinations or rotational angle errors of said image acquisition devices, calculates positions thereof from not only the position of the collimation target, but also the images acquired from said image acquisition devices, and computes three-dimensional coordinate data of the object to be measured, the coordinate data having been acquired by said image acquisition devices, in combination with the rest of the claim limitations.

Prior art

5. The prior art made record and not relied upon is considered pertinent to applicant's disclosure:

Chan ['334] discloses three-dimensional image display.

Shimomura et al. ['289] disclose position measuring apparatus and optical deflection angle measuring apparatus for underground excavators.

Matsumoto et al. ['166] disclose structure measurement system.

Tannenbaum et al. ['558] disclose method and apparatus for analyzing the appearance features of a surface.

Contact information

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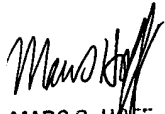
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571) 272-2213. The examiner can normally be reached Monday through Friday, from 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohamed Charioui

12/22/06


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800